REMARKS

By this amendment, claims 1-20 are pending, in which no claims are canceled, withdrawn from consideration, currently amended, or newly presented.

The final Office Action mailed July 18, 2007 rejected claims 1-20 under 35 U.S.C. §103 as obvious under 35 U.S.C. § 103 based on *Lu* (US 6,480,911).

Applicant respectfully traverses this rejection.

Independent claim 1 recites, *inter alia*, "wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue." Independent claim 14 recites, *inter alia*, "a discard policy is enabled for the third queue based on the loading of the capacity of the second queue." Independent claim 18 recites, *inter alia*, "enabling a discard policy for the third queue based on the loading of the capacity of the second queue."

All of the pending claims are rejected under 35 U.S.C. § 103 based on *Lu*, alone. Yet, the Examiner admits that *Lu* does not teach using a switch, "wherein a discard policy is enabled for the third queue based on the loading capacity of the second queue..." (Office Action of August 29, 2006 – page 3) and the Examiner admits that *Lu* does not teach "controlling the adjustable rate by a loading of the capacity of the second queue and dropping the packets from the third/low class queue based on loading capacity of the second/medium class queue" (Office Action of August 29, 2006 – page 5).

To fill in the gaps, with regard to claims 1 and 14, the Examiner takes Official Notice "that using switch matrix to interconnect the input and output ports in a packet switch is well known and expected in the art" [sic] (Office Action of August 29, 2006 – page 3), and concludes that it would have been obvious "to add using a switch, wherein the dropping of low class packets is controlled by the loading of the capacity of the second/medium class queue comprising a switch matrix" Office Action of August 29, 2006 – page 3). With regard to claim 18, the

Examiner concludes that that it would have been obvious "to add using the adjustable rate, controlled by a loading of the capacity of the second/medium queue and controlling the dropping of third/low class packets by the loading of the capacity of the second/medium class queue to the system of Lu to improve operation of the medium class packets, utilizing the method disclosed for the high class packets and by providing the medium class packets additional buffer space, taken from the buffer space designated for the low class priority packets" (Office Action of August 29, 2006 – pages 5-6). The Examiner specifically points to col. 10, lines 45-51 of *Lu*.

Applicant submits that the Examiner's rationale is based on impermissible hindsight and constitutes an improper basis for concluding obviousness of the claimed subject matter.

First, with regard to "Official Notice," while Official Notice of some facts may be taken, in some instances, to fill in the gaps, such facts should not comprise the principal evidence upon which a rejection is based. See *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420-421 (CCPA 1970). Yet, the principal evidence that the Examiner offers for providing a switch matrix for performing the claimed functions rests with the taking of Official Notice. As noted in the cited portion of *Ahlert*, the notice of facts beyond the record which may be taken by the Examiner must be "capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). In the present case, the Examiner's notice providing a switch matrix for performing the claimed functions as being well known is not capable of instant and unquestionable demonstration as to defy dispute, as evidenced by the Examiner's failure to demonstrate such. In appropriate circumstances, it might not be unreasonable to take Official Notice of the fact that it is desirable to make something faster, cheaper, better, or stronger without the specific support of documentary evidence. However, in the present case, there is not an issue about making something faster, cheaper, better, or stronger, *per se*. Rather, the question in the present case concerns, even,

assuming, *arguendo*, switch matrices were known to be in queuing congestion devices, why/how would the artisan have provided such a "switch matrix" (which, by the way, forms no part of the present independent claims 1 and 18) in a manner to provide, for example, "a queue shaper operable to set an adjustable rate in which the packets of information of the third queue are communicated to the scheduler, wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue." The skilled artisan would not have been led, by the mere knowledge of a "switch matrix," to enable a discard policy for a third queue based on the loading of the capacity of a second queue.

In accordance with MPEP § 2144.03, the circumstances where Official Notice may be relied on should be "rare" when an application is under final rejection. The present application is now under a final rejection and the Examiner has yet to supply any documentary evidence confirming that of which the Examiner takes Official Notice, even though Applicant traversed, i.e., challenged, the Official Notice at page 10 of the response of August 4, 2006.

The Examiner cannot rely on conclusory statements, viz., "Official Notice is taken that using switch matrix to interconnect input and output ports in a packet switch is well known and expected in the art" [sic] (Office Action of August 29, 2006 – page 3), when dealing with a particular piece of prior art and specific claims. The rejection must set forth the rationale on which the Examiner relies. Accordingly, the Examiner's reliance on Official Notice, which has been challenged by Applicant, to provide the principal evidence upon which the present rejection is based, is inappropriate.

Moreover, assuming that the Official Notice is taken only as to the prior art existence of a switch matrix, and nothing more, and assuming Applicant accepts this, such Official Notice does not explain how one jumps from acknowledging the existence of a switch matrix to the provision of, for example, "a queue shaper operable to set an adjustable rate in which the packets of

information of the third queue are communicated to the scheduler, wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue," as claimed, in *Lu*. The gap is simply too wide to make such a jump. For the Examiner to allege that knowledge of the existence of a matrix switch would somehow lead an artisan to provide for "wherein a discard policy is enabled for the third queue based on the loading of the capacity of the second queue," or "a discard policy is enabled for the third queue based on the loading of the capacity of the second queue," or for "enabling a discard policy for the third queue based on the loading of the capacity of the second queue," as provided for in the present claims, is simply premised on impermissible hindsight.

The present claims are directed to a device or method of providing congestion management in a packet switch of a packet network. The claimed subject matter includes three queues, a scheduler and a queue shaper for setting an adjustable rate at which packets of information of the third queue are communication to the scheduler, and wherein "**a discard policy is enabled for the third queue based on the loading of the capacity of the second queue**." There is no teaching of such a **discard policy** in *Lu* and the Examiner admits as much. The Examiner refers to col. 10, lines 30-40, of *Lu*; however, this portion of the reference does relate to adjusting weight of throughput of queues and favoring of higher class subscribers. The cited passage also recites, "...during congestion, data packet **dropping** may begin with the low class when the total network capacity is exceeded" such that high class communications quality if protected. However, this merely relates to the dropping, or discarding, of lower class communication in favor of higher class communication when the total network capacity is exceeded. It teaches, or suggests, nothing about discarding data in one queue based on the loading of capacity of another queue, as required by all of the present claims.

As Applicant explained in the response of August 4, 2006, at page 9, *Lu* discloses the use of "hard" and "soft" buffer thresholds in its technique for maintaining a particular quality of communication. Action is taken when a maximum number of data packets than can be stored in the queue is exceeded. For hard buffer thresholds, the action is "data packets are dropped or deleted" (col. 7, lines 61-62) but for soft buffer thresholds, a "recovery action such as changing the weights to realign data throughput to adapt" (col. 8, lines 27-28) is taken. There is no disclosure in *Lu* that its hard buffer thresholds can be readjusted during operation. This is in keeping with the inflexible nature of buffer thresholds that are tied to underlying hardware limitations. *Lu*, in fact, counsels against the use of "[c]omplex schemes for dropping data packets" (col. 7, line 66) and recommends the use of soft buffer thresholds that are always less than hard buffer thresholds (col. 8, lines 24-25). These soft buffer thresholds can readjust capacity weights in an effort to avoid exceeding the hard buffer thresholds (col. 8, lines 24-29).

Lu does not suggest "enabling a discard policy for the third queue based on the loading of the capacity of the second queue," since the packets in *Lu* are always and only discarded when its inflexible, hard buffer thresholds are exceeded. And, to the extent that *Lu* deals with solving the problem of exceeding the hard buffer threshold, *Lu* teaches against "enabling a discard policy" in its blanket condemnation of complex packet-dropping "schemes."

The Examiner points to col. 1, lines 34-40, and col. 10, lines 17-46, of *Lu* as evidence of the flexibility of the hard buffer thresholds. While it is not clear from these cites passages that the hard buffer thresholds are adjustable, to the extent that normalization and/or capacity weight is used to set the buffer threshold (e.g., col. 10, lines 18-19), the setting of these thresholds does not appear to be during operation but, rather, during the pre-setting of the buffer thresholds. In any event, there is still no teaching or suggestion in *Lu* of "enabling a discard policy for the third queue based on the loading of the capacity of the second queue," as claimed.

Hence, there is no teaching or suggestion in *Lu* of enabling a discard policy for one or more queues wherein that discard policy is based on the loading of the capacity of one of the other queues, as disclosed and claimed in the present application.

Accordingly, no *prima facie* case of obviousness has been established and, for this reason, the Examiner is respectfully requested to withdraw the rejection of claims 1-20 under 35 U.S.C. §103.

Therefore, the present application, as amended, overcomes the rejections of record and is in condition for allowance. Favorable consideration is respectfully requested. If any unresolved issues remain, it is respectfully requested that the Examiner telephone the undersigned attorney at (703) 519-9952 so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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